

**Device for non-invasive determination of glucose concn. in blood**

**Patent number:** CN1184936  
**Publication date:** 1998-06-17  
**Inventor:** KATSUHIKO MARUO (JP); KEISUKE KIYOMIZU (JP); MASAMI OKA (JP)  
**Applicant:** MATSUSHITA ELECTRIC WORKS LTD (JP)  
**Classification:**  
- **International:** G01N33/66; G01N21/25  
- **European:**  
**Application number:** CN19970121690 19971126  
**Priority number(s):** JP19970169267 19970625; JP19970271709 19971003;  
JP19960314379 19961126

**Also published as:**

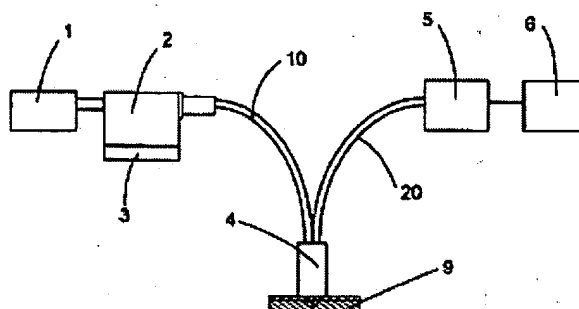
EP0843986 (A2)  
US6016435 (A1)  
JP11070101 (A)  
EP0843986 (A3)  
EP0843986 (B1)

more &gt;&gt;

Abstract not available for CN1184936

Abstract of corresponding document: **EP0843986**

A device for the non-invasive determination of glucose concentration in the blood of a subject comprises a light source for producing near-infrared radiation having successive wavelengths within the range of 1300 to 2500 nm, a light projecting unit for projecting the near-infrared radiation on the skin of the subject, a light receiving unit for receiving resulting radiation emitted from inside the skin, and a unit for analysing the spectrum of the resulting radiation and determining the glucose concentration according to the spectrum analysis. The light receiving unit is separated from the light projecting unit by a distance within the range of 0.1 to 2 mm to selectively sense the resulting radiation emitted from a dermis layer positioned under the epidermis layer of the skin. The glucose concentration in the blood is determined by the spectrum analysing unit by using the spectrum analysis and a statistically-obtained correlation between the glucose concentration in the dermis region and that in the blood.

**FIG. 1**

Data supplied from the esp@cenet database - Worldwide